

NOTES ON THE TERMITOPHILOUS GENUS *Corotoca*, WITH A NEW SPECIES FROM BRAZIL (COLEOPTERA, STAPHYLINIDAE)LUIZ ROBERTO FONTES¹

ABSTRACT

New distributional and morphological data on Corotoca melantho and C. phylo are reported; C. seeversi, n. sp., from Brazil, is described; a key for the species of the genus is presented.

Schiödte (1853) described *melantho* and *phylo*, the first two species of *Corotoca*, based on samples from Lagoa Santa, Minas Gerais, Brazil. Mann (1923) added *guyanae*, from Kartabo, Guyana. Seevers (1957) described *C. araujo*, from Rio Pardo de Minas, Minas Gerais, Brazil, presenting a key to all species. Silvestri (1946) described the larva of *C. melantho* and the genitalia and mouth parts of that species and of *C. phylo*. Seevers (1957) monographed the genus.

Since Seevers' paper numerous samples of *Constrictotermes*, the host termites of *Corotoca*, became available in the Museu de Zoologia da Universidade de São Paulo (MZSP), Brazil. A preliminary study of this material indicates the need for a revision of previous identifications of host termites reported in the literature; for this reason the new records in this paper are restricted to the genus of the hosts.

All specimens studied are in the collection of the Museu de Zoologia.

Corotoca melantho Schiödte, 1853
(Figs. 1, 4, 5, 8, 11)

Corotoca melantho Schiödte, 1853: 102; 1854: 9, pl. 1; 1856: 172, pl. 1, figs. 1-16; Silvestri, 1903: 198, 213; Reichensperger, 1936: 188, fig. 3; Silvestri, 1946: 4, figs 1-2; Seevers, 1957: 142.

This species differs from *phylo* by the bristles of the mentum-submentum, abdomen and male genitalia: mentum-submentum (fig. 1) with one long bristle at each antero-lateral angle, and one shorter bristle near each latero-posterior margin; abdomen (fig. 8) with segment VII relatively less developed than in *phylo*; sternites 5-6 distinctly transverse, reaching the sides of abdomen; distinctive chaetotaxy at anterior 2/3 of sternite 7 (fig. 11): long bristles, disposed along anterior margin, sometimes lined up at transverse median region; the shape of the abdomen and the transversal aspect of sternites 5-6 had already been mentioned by Schiödte (1853; 1856), a difference not considered by subsequent authors; I suspect figure 2 of Silvestri (1946) to have been based on a specimen of *C. phylo* and not of *C. melantho*, as labelled, since all examined specimens of *C. melantho* agree with the above description; aedeagus (figs. 4, 5) relatively long (more than two times as long as sternite 8), median and lateral lobes subequal in length.

Third sternite longitudinally membranous in the middle, except at posterior end, in the female, fully sclerotized in the male.

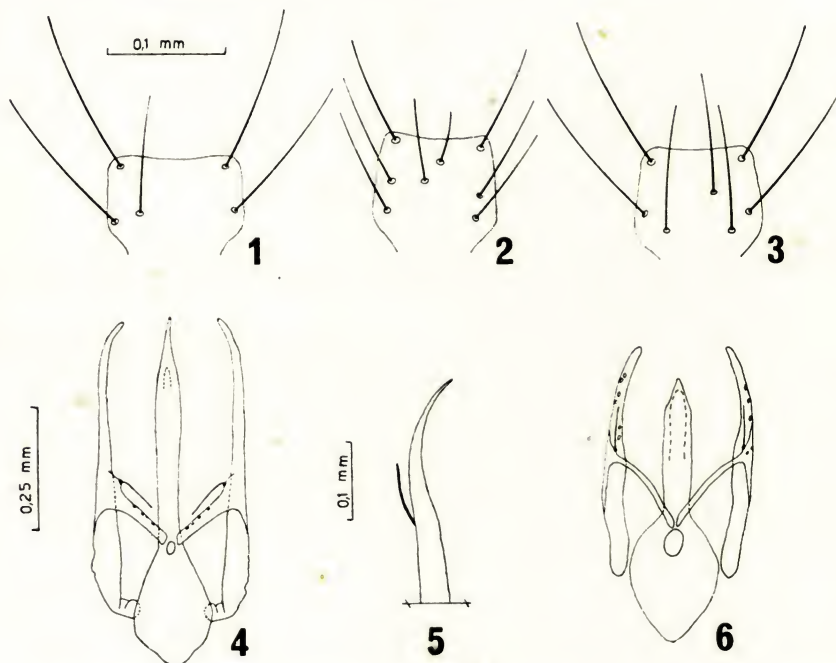
1. Estagiário. Museu de Zoologia, Universidade de São Paulo, Caixa Postal 7172, 01000 São Paulo, SP. Bolsista, Fundação de Amparo à Pesquisa do Estado de São Paulo (Proc. Biol. n° 77/168).

The bristles of the mentum-submentum and the tuberosities on pronotum may present some variation: the mentum-submentum (fig. 1) may have an additional, more internally placed bristle, usually on the right side; some specimens of *C. melantho* may present a relatively large median tuberosity on the disc of pronotum and, although pronotal depressions are not so pronounced as in *C. phylo*, this character cannot be taken alone to distinguish the two species.

Material. BRAZIL. *Minas Gerais*: Curvelo, 1 ♂, 4.X. 1956, R. L. Araujo; 1 ♀, 24. VIII. 1971, R. L. Araujo; Montes Claros, 1 ♂, 2 ♀, 8.I.1952, R. L. Araujo; Rio Pardo de Minas, 1 ♂, 4 ♀, 10.I.1952, R. L. Araujo. *D. F.*: Brasília, 2 ♂, 2 ♀, R. L. Araujo; 2 ♂, 2 ♀, XI.1970, K. Kitayama. *Pernambuco*: Arcoverde, 7 ♂, 17 ♀, 15.VII.1974, R. L. Araujo. *Ceará*: Chapada Araripe (near Crato), 2 ♀, 9.XI.1975, R. L. Araujo; Crato, 10 ♂, 18 ♀, 10.XI.1975, R. L. Araujo. All specimens with *Constrictotermes* spp.

Corotoca phylo Schiödte, 1853
(Figs. 2, 6, 10, 12)

Corotoca phylo Schiödte, 1853: 102; 1854: 9, pl. 1; 1856: 172, pl. 1, figs. 17-18; Silvestri, 1903: 198, 213, fig. 265; Hegh, 1922: 611, fig. 413; Silvestri, 1946: 6, fig. 4; Seevers, 1957: 143, fig. 21a-b.



Corotoca melantho: 1, mentum-submentum; 4, aedeagus, ventral view; 5, aedeagus, posterior third of median lobe, lateral view. *C. phylo*: 2, mentum-submentum; 6, aedeagus, ventral view. *C. seeversi*: 3, mentum-submentum. Figures 1-3, figure 4, and figures 5-6, respectively, at the same scale. Drawings of *C. melantho* and *C. phylo* based on samples from Brasília.

Mentum-submentum (fig. 2) with 3 or 4 long bristles near each lateral margin and some more internally placed bristles, asymmetrically placed. Abdomen (fig. 10) largely membranous at sides, segment VII greatly developed; sternites 5-6 subquadrate (as in fig. 7); anterior 2/3 of sternite 7 (fig. 12) with short bristles along anterior margin and moderately numerous, not aligned, at median region. Aedeagus (fig. 6) relatively short (approximately as long as sternite 8), the median lobe shorter than lateral lobes.

This species has no apparent sexual dimorphism.

Schiödt (1856) stated that the number of abdominal bristles in this species is reduced; according to his figures, there are two bristles on sternites 5-6 and four on sternite 7. All specimens examined by me have higher number of bristles, although some specimens from Minas Gerais, Brazil, have scarcely visible bristles.

Material. BRAZIL. *Minas Gerais*: Francisco Sá, 1 specimen, 18.VII.1975, R. L. Araujo; Montes Claros, 4 specim., 8.I.1952, R. L. Araujo; 2 specim. 16.XI.1972, R. L. Araujo; Rio Pardo de Minas, 1 specim., 10.I.1952, R. L. Araujo. *Bahia*: Senhor do Bonfim a Capim Grosso, 1 specim., 21.VII.1974, R. L. Araujo. *D. F.*: Brasília, 6 specim., R. L. Araujo; 4 specim., XI.1970, K. Kitayama. *Pernambuco*: Arcoverde, 2 specim., 15.VII.1974, R. L. Araujo; 7 specim., 16.VII.1974, R. L. Araujo. *Piauí*: Francisco Santos, 1 specim., 7.XII.1976, R. L. Araujo. *Ceará*: Crato, 15 specim., 10.XI.1975, R. L. Araujo. All specimens with *Constrictotermes* spp.

***Corotoca seeversi*, sp. n.**

(Figs. 3, 7, 9)

♀. Head dark reddish-brown, vertex somewhat darker near eyes, finely and moderately punctured, base microsculptured; vertex with 4 long bristles in a transverse row; clypeus with pale bristles. Mentum-submentum (fig. 3) with one long bristle at each antero-lateral angle, a shorter, posterior one, near each latero-posterior margin, and a few more internally, asymmetrically disposed. Segments 2 and 3 of maxillary palpi subequal in size. Scape yellowish-brown, remaining segments pale; relative lengths of the antennal segments as follows: 29: 6: 18: 18: 16: 15: 15: 14: 12: 11: 19. Pronotum uniformly black, sparse and very finely punctured, trituberculate, one-half broader than long. Elytra pale, translucent. Pro-, meso- and metasternum dark-brown (the later pale-yellow behind the insertion of mesocoxae). Coxae and trochanters dark-brown; anterior femora brown, middle and hind femora black; anterior tibiae brown (external apical half a little darker), middle and hind tibiae black; tarsi light-brown. Abdomen (fig. 7) largely membranous at sides; membranes white; sternite 3 largely membranous longitudinally, except at posterior end; sternites 3-6 yellowish-brown, contrasting with membranes; anterior half of sternite 7 yellowish-brown, apical half darker, reddish-brown, strongly contrasting with membranes; sternite 8 reddish-brown (a little paler than apical half of sternite 7); anterior 2/3 of sternite 7 (fig. 9) with short bristles along anterior margin, sometimes transversally lined up at median region.

C. seeversi is related to *C. phylo*; both have a fine head puncturation, 4 long bristles in a transverse row on vertex, abdomen (figs. 7, 10) largely membranous at sides, sternites 5-6 subquadrate not reaching sides of abdomen, relatively short bristles on sternite 7 (figs. 9, 12), and same size. *C. seeversi* is distinguished by its coloration (pronotum, middle and hind femora and tibiae black), by the bristles on mentum-submentum (figs. 2, 3) (one long bristle at each anterior angle and a shorter, posterior one, near each lateral margin), and by the distinctive chaetotaxy of sternite 7 (figs. 9, 12).

This species resembles *C. araujoi*, both having the same pattern of body coloration and lacking the fine pubescence on sternite 5-7. Although I have exami-

ned only females of *C. seeversi*, I feel confident it is a new species, since the other examined species of the genus present little or no sexual dimorphism.

Measurements, in mm

Length (abdomen recurved), 3,2 — 3,5; width of abdomen, 1,2 — 1,4.

Material. BRAZIL. *Minas Gerais*: Francisco Sá, holotype ♀, paratype ♀, 19.VII.1975, R. L. Araujo; 2 paratypes ♀, 16.VII.1975, R. L. Araujo. All specimens with species of *Constrictotermes*.

Key to the species of *Corotoca* (modified from Seevers, 1957)

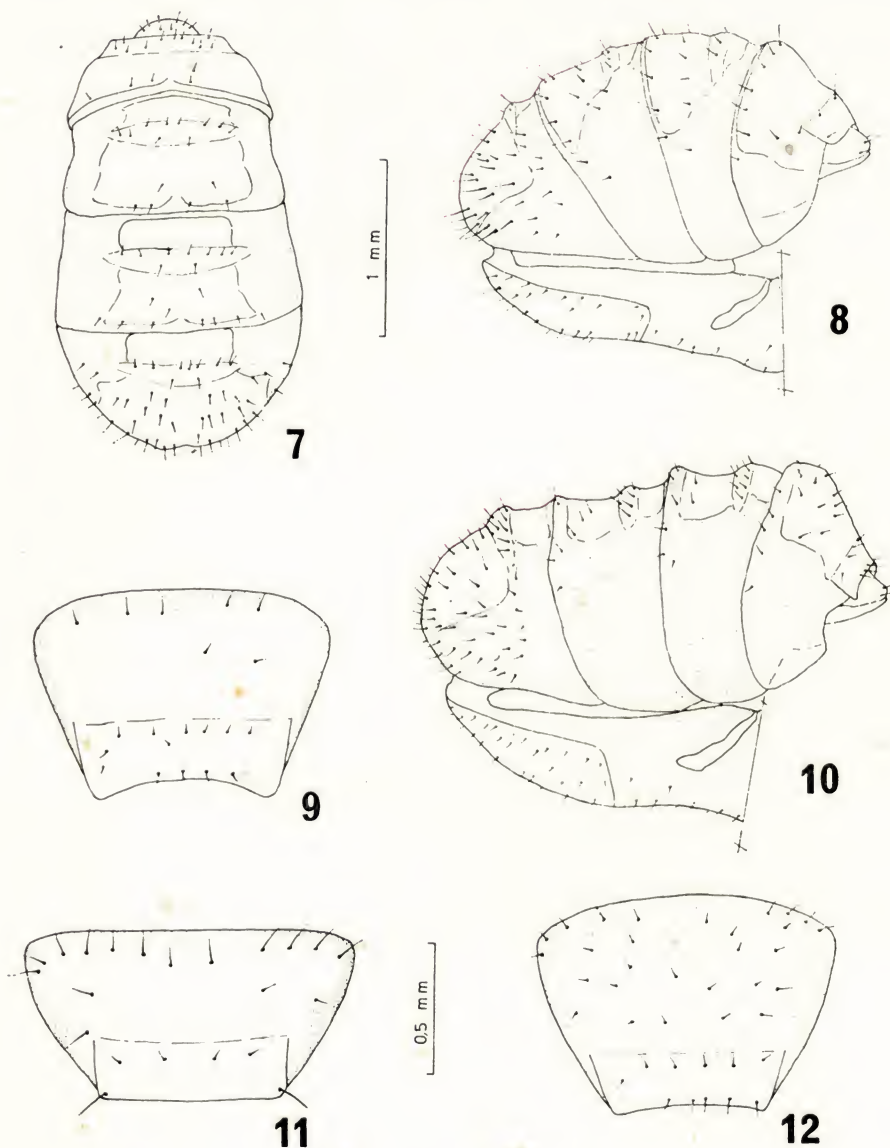
1. Third segment of maxillary palpi robust, broader and almost three times as long as second; occiput with an incision in the median line. *guyanae* Mann
Third segment of maxillary palpi small, subequal in size to second; occiput without median incision 2
- 2(1). Head with four long bristles on vertex; sternites 5-8 with numerous dark bristles (figs. 7-12) 3
Head without vertical bristles, very smooth and shining; sternites 5-8 with inconspicuous, very few pale hairs; pronotum, middle and hind femora and tibiae black (contrasting with tarsi, which are light-brown); abdomen largely membranous at sides *araujo* Seevers
- 3(2). Abdomen developed (fig. 10), largely membranous at sides; sternites 5-6 subquadrate (fig. 7) 4
Abdomen less developed (fig. 8); sternites 5-6 distinctly transverse; chaetotaxy of anterior 2/3 of sternite 7 (fig. 11); mentum-submentum (fig. 1) with two long bristles near each lateral margin *melantho* Schiödt
- 4(3). Chaetotaxy of anterior 2/3 of sternite 7 (fig. 9); pronotum, middle and hind femora and tibiae black (contrasting with tarsi, which are light-brown); mentum-submentum (fig. 3) with two long bristles near each lateral margin *seever*si, sp. n.
Chaetotaxy of anterior 2/3 of sternite 7 (fig. 12); pronotum, middle and hind femora and tibiae dark-brown to reddish-piceous (the pronotum usually lighter at the central region); mentum-submentum (fig. 2) with three or four long bristles near each lateral margin *phylo* Schiödt

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REFERENCES

- Hegh, E., 1922. *Les Termites*, 756 pp., Brussels.
Mann, W. M., 1923. New genera and species of termitophilous Coleoptera from northern South America. *Zoologica*, N. York, 3:323-366, 40 figs.
Reichensperger, A., 1936. Ergebnisse neuerer Forschungen an Ameisen-und Termitengästen. *Arb. phys. angew. Ent.*, Berlin, 3: 186-192, 5 figs.
Schiödt, J. M. C., 1853. On some Staphylinidae, found in the nests of termites. *Proc. Zool. Soc. London* 21: 101-103.



Corotoca melantho: 8, abdomen, lateral view; 11, sternite VII. *C. phylo*: 10, abdomen, lateral view; 12, sternite VII. *C. seeversi*: 7, abdominal sternites IV-VIII; 9, sternite VII. Figures 7, 8, 10, and figures 9, 11, 12, respectively, at the same scale. Drawings of *C. melantho* and *C. phylo* based on samples from Brasília.

- Schiödte, J. M. C., 1854. Corotoca og Spirachtha: *Staphyliner som føde levende Unger, og ere Huusdyr hos en Termit*, 19 pp. Copenhagen.
- Schiödte, J. M. C., 1856. Observations sur des Staphylinins vivipares qui habitent chez les termites, à la manière des animaux domestiques. *Ann. Sci. nat.*, Paris, ser. 4, Zoologie, 5: 169-183, 1 pl.
- Seevers, C. H. 1957. A monograph on the termitophilous Staphylinidae (Coleoptera). *Fieldiana: Zoology*, 40: 1-334, 42 figs.
- Silvestri, F., 1903. Contribuzione alla conoscenza dei Termitidi e Termitofili dell'America meridionale. *Redia*, Florence, 1: 1-234, 6 pls.
- Silvestri, F., 1946. Contribuzione alla conoscenza dei Coleotteri Corotocini («Staphylinidae-Aleocharinae») termitofili dell'America meridionale. *Mem. Atti Accad. Naz. Lincei, Classe di Sci. fis., mat. e nat.*, (8) 1: 1-22, 12 figs.